Aug. 30, 1949. W. F. KALHOEFER 2,480,371

OIL SAVER AND SUCKER ROD STRIPPER

Filed Jan. 15, 1945 2 Sheets-Sheet 1

Fig. 1.

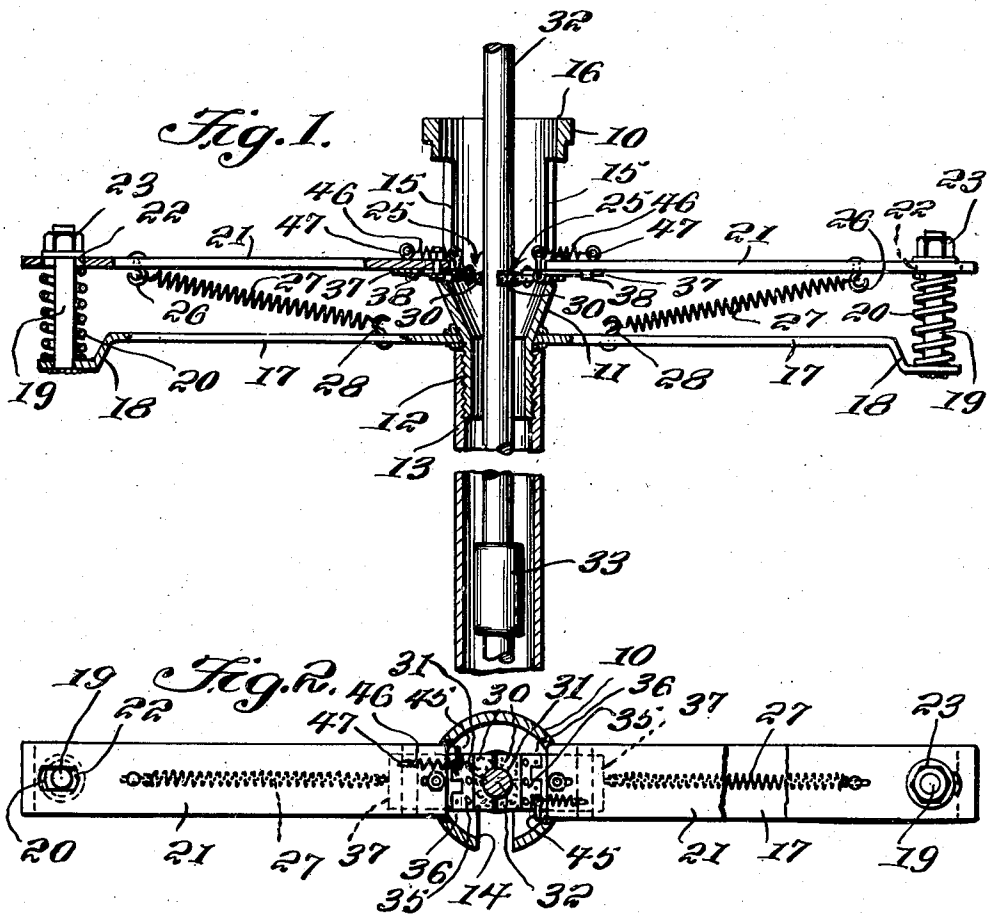


Fig. 2.

Fig. 3.

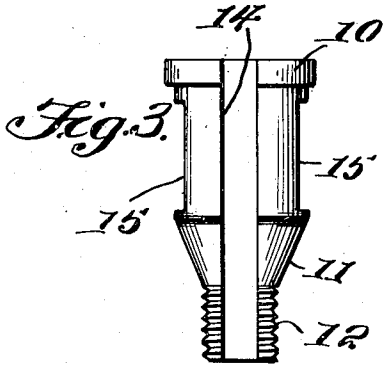


Fig. 4.

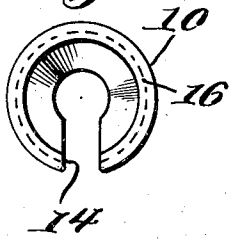
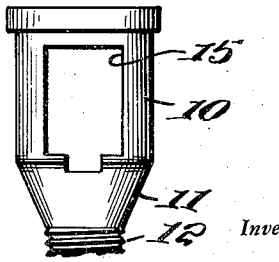


Fig. 5.



Inventor

Walter Frank Kalhoefer

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Aug. 30, 1949. W. F. KALHOEFER 2,480,371

OIL SAVER AND SUCKER ROD STRIPPER

Filed Jan. 15, 1945 2 Sheets-Sheet 2

Fig. 6.

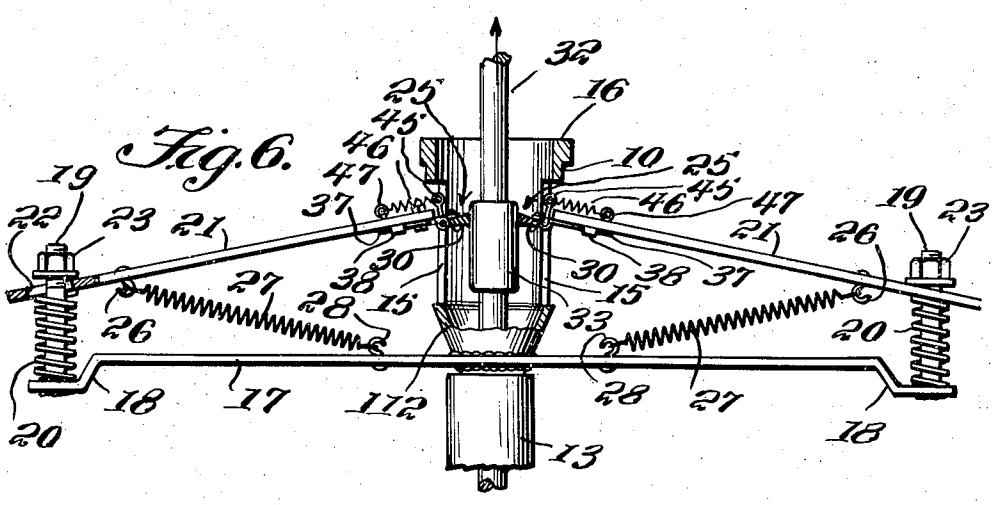


Fig. 7.

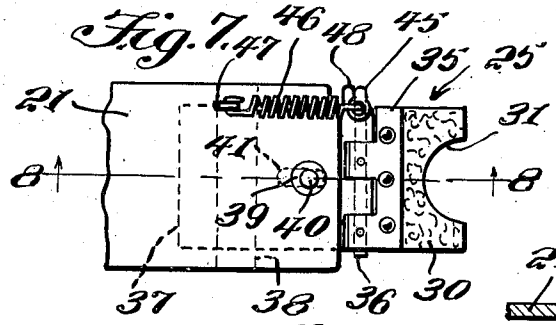


Fig. 8.

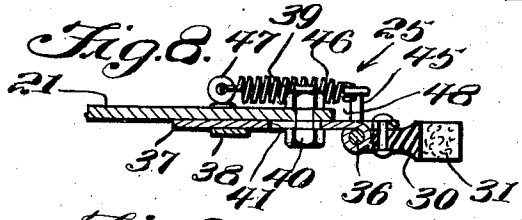


Fig. 9.

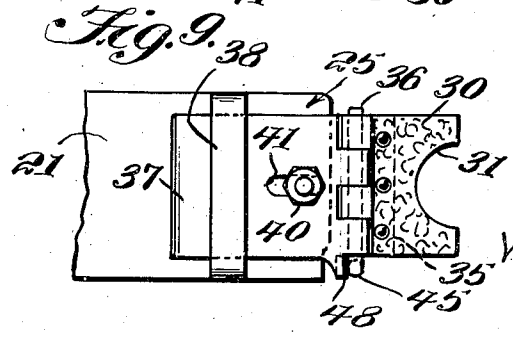


Fig. 10.

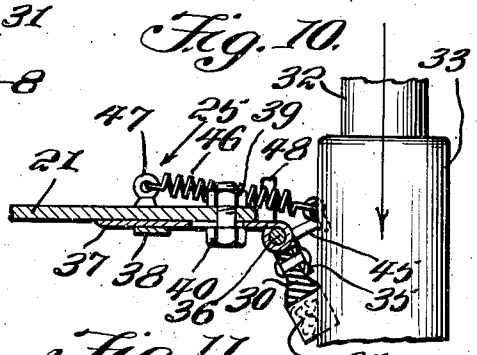
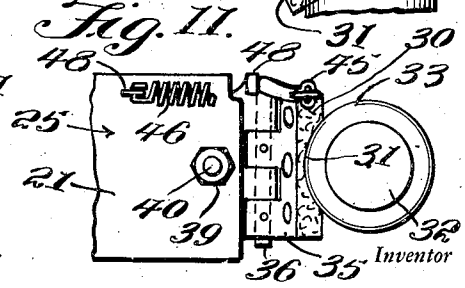


Fig. 11.



Inventor

Walter Frank Kalhoefer

By Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Patented Aug. 30, 1949 2,480,371

UNITED STATES PATENT OFFICE

2,480,371

OIL SAVER AND SUCKER ROD STRIPPER

Walter Frank Kalhoefer, Bowie, Tex.

Application January 15, 1945, Serial No. 572,883

8 Claims. (Cl. 166—16)

1

This invention relates to an oil saver and sucker rod stripper.

A primary object of this invention is the provision of an improved sucker rod stripper, adapted to save the oil otherwise removed from an oil well when a sucker rod is removed, as well as strip the same in order to make the same more readily handled, without soiling the clothes or persons of the operators.

An additional important object is the provision of such a sucker rod stripper so constructed that a rod joint may be passed therethrough without the necessity for manual adjustment of the same.

Still another object is the provision of such a stripper having means to permit the passage of a rod joint in a reverse direction if for any reason it becomes necessary to relower the rod during the course of removal.

Still another object is the provision of an oil saver and sucker rod stripper which will be reliable and efficient in operation, sturdy and durable in construction, and relatively simple and inexpensive to manufacture, assemble and position.

Other objects will in part be obvious and in part be pointed out hereinafter and shown in the accompanying drawings wherein there is disclosed a preferred embodiment of this inventive concept.

In the drawings:

Figure 1 is a side sectional view of one form of device embodying the instant invention, shown in association with an oil well pumping joint or T.

Figure 2 is a plan, part sectional, view of Figure 1 looking downwardly.

Figure 3 is a side elevational view of a constructional detail.

Figure 4 is a top plan view of the device shown in Figure 3.

Figure 5 is a side elevational view of the device shown in Figures 3 and 4 as viewed from the opposite side.

Figure 6 is a side view partially in section and partially in elevation similar to Figure 1 but showing the parts in a different position of adjustment.

Figure 7 is a top fragmentary plan view of a constructional detail.

Figure 8 is a sectional view taken along the line 8—8 of Figure 7.

Figure 9 is a fragmentary bottom plan view of the detail shown in Figures 7 and 8.

Figure 10 is a view similar to Figure 8 but showing the parts in a different position of adjustment, and

2

Figure 11 is a top plan view of the parts disclosed in Figure 10 shown in the same position of adjustment.

Like reference numerals refer to like parts throughout the several views of the drawings.

Having reference now to the drawings, a casing head 10 provided with a casing head nipple 11 is threaded as at 12 to permit the threaded engagement thereof with suitable threads on a casing or tubing, or pumping joint, or T, 13. Casing head 10 is provided with a longitudinally extending groove 14, to permit the same to be slipped over a sucker rod for adjusting in position, and a pair of oppositely disposed apertures 15 (see Figure 5). It may here be pointed out that the casing head 10 should be of relatively strong, sturdy construction, for, under certain conditions, oil well rod elevators are positioned to rest upon and be supported by the upper surface 16 thereof.

Welded or otherwise suitably secured to casing head nipple 11 are two oppositely disposed extending strip iron supporting arms 17, bent at their extremities as at 18, to provide seats for bolts 19 adapted to pass through suitable apertures in the ends thereof. Surrounding bolts 19 are relatively heavy compression springs 20 upon which are adapted to be seated transverse resiliently cushioned actuating arms or members 21 extending inwardly in substantial parallel alignment with members 17. Members 21 are each provided with a transverse slot 22 through which bolt 19 is adapted to pass, and a nut 23 on each of bolts 19 is adapted to hold the parts in related assembly. The inner ends of the arms or members 21 are adapted to extend inwardly through apertures 15 in casing head 10 and terminate in rod stripping portions generally indicated at 25. Each of the arms or members 21 is provided with a hook 26 positioned on the underside thereof adjacent its outer extremity, from which a tension spring 27 extends to a hook 28 secured to the upper side of each of members 17. Thus it will be seen that the tendency of the spring 27 is to bias rod stripping members 25 downwardly toward members 17 until they seat on the bottom of recesses 15. Having particular reference now to rod strippers 25 it will be seen (see Figure 7) that each is comprised of a cleaning member 30 comprised of rubber or other suitable stripping material and provided with a semi-circular aperture 31 adjacent the outer face thereof. The two opposed apertures 31 are

adapted to surround and strip a sucker rod 32, which is comprised of several sections secured together as by rod boxes 33. Cleaning members 30 are suitably secured to a bracket 35 which is pivotally mounted on a pivot 36 secured to a plate 37 which, in turn, is secured to the end of members 21, as by a band 38 extending about the bottom thereof and a nut 39 and bolt 40 extending through a slot 41 in plate 37 and a suitable aperture adjacent the end of member 21. Slot 41 is provided in order that members 30 may be suitably adjusted in accordance with the diameter of the sucker rod being cleansed and also in accordance with the wear on these portions occasioned by repeated stripping operations.

An upright member 45 extends upwardly from bracket 35 adjacent an extremity thereof and is secured at its end with a tension spring 46, the opposite end of which is secured to an eye 47 mounted on the end of member 21. A stop 48 is provided to preclude the passage of upright 45 beyond right angle position.

From the foregoing the method of operation of the device should now be readily understandable. The threaded portion 12 of casing head 10 is suitably engaged with casing or pumping joint 13, and cleaning members 30 held in oppositely disposed abutting relation with sucker rod 32 as by springs 30. As the sucker rod is pulled upwardly out of the well members 30 serve to strip the oil from the same permitting it to fall back into the well. When a rod box or joint 33 is reached, the abutting action thereof against members 30 force arms 21 upwardly against the tension of springs 27 within the limits of slot 15, to provide sufficient clearance of the box or joint to pass between the opposite members. After the box has been pulled out of the casing head, springs 27 bias the members back, from the position shown in Figure 6, to the position shown in Figure 1, whereupon the stripping action is resumed. If for any reason it is necessary to lower the rod back into the well, means are provided for permitting the passage of the rod joints or boxes between the cleaning members 30, such means comprising the pivots 36. As the rod joint reaches the cleaning members they are tilted downwardly about pivot 36, as shown in Figures 10 and 11, and when the rod box or joint has passed between the members the springs 46 bias the parts back to operating position, stop 48 abutting against upright 45, precluding the passage of the cleaning members beyond the horizontal.

From the foregoing it will now be seen that there is herein provided a sucker rod stripper and oil saver, accomplishing all the objects of this invention and others including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally supported on said spaced arms adapted to extend through said apertures, and cleaning devices supported on the inner adjacent ends of said resiliently cushioned arms.

2. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, and cleaning devices pivotally supported on the inner adjacent ends of said resiliently tensioned arms.

3. A device of the character described including a casing head having oppositely disposed apertures formed through its wall and being longitudinally slotted throughout its length, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally supported on said spaced arms adapted to extend through said apertures, and cleaning devices supported on the inner adjacent ends of said resiliently cushioned arms.

4. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, and adjustably supported cleaning devices pivotally mounted on the inner adjacent end of said resiliently tensioned arms.

5. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, and spring tensioned cleaning devices pivotally mounted on the inner adjacent ends of said resiliently tensioned arms.

6. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, cleaning devices pivotally mounted on the adjacent ends of said resiliently tensioned arms, and means to limit the pivotal movement of said cleaning devices.

7. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, cleaning devices pivotally mounted on the inner adjacent ends of said resiliently tensioned arms, and means for biasing the movement between said spaced arms and said resiliently cushioned arms.

8. A device of the character described including a casing head having oppositely disposed apertures formed through its wall, spaced oppositely disposed supporting arms extending outwardly from and supported by said casing head, resiliently cushioned arms pivotally mounted on said spaced arms adapted to extend through said apertures, spring tensioned cleaning devices pivotally mounted on the adjacent ends of said

resiliently tensioned arms, and resilient means for biasing the movement between said spaced arms and said resiliently cushioned arms.

WALTER FRANK KALHOEFER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,572,394	Krebs	Feb. 9, 1926
1,809,175	Loomis	June 9, 1931
1,839,394	Inge	Jan. 5, 1932
2,264,600	Webb	Dec. 2, 1941
2,345,815	Harroun	Apr. 4, 1944